

## CAPITAL PROJECT JUSTIFICATION 2003 -2004

mechanical life of the fan.

A ClearFlow upgrade could use several different types of heating elements. Since each element profile is designed for a particular fuel or fouling problem, the optimized selection (for the proposed replacement) are the DL7 elements. The DL7 are a loose pack element, similar to the existing DL profile, but with a higher thermal performance, allowing a drop from 3 layers to 2.

Another option available with the ClearFlow up-grade is not only turning over (or flipping) the element baskets, as with the present heaters, but because both the hot end and cold end layers are the same depth (41"), the hot and cold end layers can be switched as the elements wear. This allows for more even wear on the hot and cold ends of each layer.

<u>COST ESTIMATE:</u>	Installation Labor	\$ 1,100,000
	Material	\$ 2,663,000
	Taxes	\$ 153,123
	Freight	<u>\$ 336,000</u>
	Job Total	\$4,252,123

ALTERNATIVES: In-kind Replacement would consist of replacement of DL elements and general air heater refurbishment. It would restore the air heaters to design specifications. Lost performance would be regained, but no additional capability provided.

EFFECT OF DEFERRAL: Lost savings. Eventual structural failure and loss of efficiency.

LADWP REQUIRED SUPPORT: None

### PROJECT HISTORY:

Aging of air heater heat transfer elements have raised questions regarding both performance and structural integrity of the transfer surface. Significant advances in air heater technology, since initial installation, now afford us valuable alternatives for air heater and system performance improvement.